

PRE-REHABILITATION PLAN

Pearrygin Lake

I. PROPOSAL

A. Justification for Proposed Rehabilitation

(1-2) Pearrygin Lake has historically been one of the more productive trout lakes in Okanogan County. Illegal introductions of spiny ray fishes in recent years, has seriously compromised this once great fishing lake. Fingerling plants of rainbow can only produce yearling fish 8"-9" long due to competition with the warmwater species in the lake (largemouth bass, bridgelip suckers). Legal plants of rainbow trout could prolong the fishery, but are much more expensive to produce at the hatcheries and could be used at other less productive waters instead. In addition, angler surveys indicate a preference for fingerling planted fish that have experienced an entire growing season in the lake versus catchable trout that are planted just prior to the opener. Treatment is needed at this time to restore Pearrygin Lake back to trout only water.

(3) Primary management of these waters is for trout only.

(4) Lake rehabilitation with rotenone was successful in 1951 to remove suckers and largemouth bass.

B. Physical Description of Water Proposed for Rehabilitation

1. WATER: Pearrygin Lake
2. LOCATION: Sec 36, T35N R21E; Sec 31 T35N R22E; Sec 1, T34N R21E; Sec 6, T34N R22E, Okanogan Co.
3. SURFACE ACRES: 212
4. MAX. DEPTH: 48
5. VOLUME: 6260 acre-feet 17,022,993,000 lbs water
6. OUTLET: Chewuch Irrigation District outfall canal
7. STREAM: MILES N/A FLOW (cfs)
8. PUBLIC ACCESS: One-day use site (WDFW) with launch facility, Washington State Park with launching facilities
9. LAND OWNERSHIP: Public 80% Private 20%;
10. ESTABLISHED RESORTS: One with launch facility (Silverline Resort)

C. Proposed Management Actions

1. WATER: Pearrygin Lake
2. TARGET SPECIES: largemouth bass and bridgelip suckers
3. DATE LAST REHABED: Oct 10, 1951
4. PROPOSED TREATMENT DATE: Oct 2006
5. REPLANTING DATE: Late-spring 2007
6. SPECIES: Rainbow trout
7. STOCKING: 32,000 catchables (8"-10") and 65,000 fingerlings (3"-4")
8. PROPOSED TOXICANT: Rotenone, powder and liquid CONCENTRATION: 1 ppm
AMOUNT (ROTENONE AT 5% ACT. INGRED): 17,023 lbs powder, 30 gal liquid
9. METHOD OF APPLICATION: pumper boats - slurry and spray; ATV with sprayer; small boat with small sprayer, backpack sprayers
10. CREW DESCRIPTION: Leader Robert Jateff, Personnel 10-12

II. PURPOSE:

Pearrygin Lake has been managed as lowland lake trout waters since the 1950's. Complete rehabilitation is the only feasible method of restoring these waters to the trout type of management scheme. Complete removal of all competing species is the goal of the rehabilitation.

III. INTENDED OUTCOME/MEASURE OF SUCCESS:

We intend to restore Pearrygin Lake to its popular harvestable trout fishery, and improve its popularity by maintaining quality trout throughout the duration of the season. Success of this measure will be apparent during annual creel surveys. Given a reasonable chance of eliminating the populations of undesirable species, the beneficial effects should be noticeable one-two years post treatment.

IV. RESOURCE IMPACTS:

1. Target species: largemouth bass and bridgelip suckers
2. District and Regional Habitat, Wildlife and Non-Game biologists have been apprised of our rehabilitation plans. No objections were raised, and only cautionary concerns were expressed on the potential impacts to non-targeted species.

According to Bradbury (1986), the effects of rotenone on benthos are variable, depending on the concentrations and species. Crustaceans are most tolerant while the smaller insects are most affected. Immediate reduction of the population average 25%, and survival doubles when access to bottom sediments exists. Benthic communities generally recover to at least pretreatment levels within two months. Zooplankton is more severely impacted, and communities generally take two to twelve months to fully recover. While relatively tolerant of even heavy doses of rotenone, amphibians (especially larval) are at risk, and herptiles are affected somewhat less so.

3. Participation in the trout fisheries should exceed that currently found for existing fisheries. The water in the lake is used for both irrigation and recreation. Dead fish along the shoreline may be offensive to the property owners for a short time after treatment.
4. Observations by local WDFW biologists, indicate the lake is frequently used by osprey and bald eagles. Restocking of the lake post-rehab with sufficient fingerling rainbow should provide an uninterrupted food source for these fish eating birds.

V. MITIGATING FOR ADVERSE IMPACTS:

1. Trout survival and growth will be greatly enhanced. No removal of dead fish is planned as the nutrient base contained therein is best returned to the lake. Disturbance of waterfowl during treatment or by the anticipated fishery will be offset by increased food availability as the uncontrollable numbers of spiny-rayed fishes are eliminated in favor of easily balanced populations of trout.
2. Water will be confined to the lake proper, and treatment will be conducted when the irrigation season is over and water is no longer needed.
3. Protective gear for the eyes, face, hands and clothes will be supplied on-site for all purveyors

of rotenone.

4. The lake will be posted according to Department of Ecology guidelines to notify the public of the treatment and discourage the public from possessing or consuming dead fish. The landowners will be notified of the rehabilitation and consequent exposure of livestock to rotenone.

VI. RECREATIONAL IMPACT: also see I.A., II and III

Recreational angling opportunity will be increased if the undesirable species are removed from Pearrygin Lake. The level of participation will dwindle to almost nothing if no action is taken immediately. Given the success of the planned management action, as many as 10,000 fishing days are estimated for the season. Anglers should average about four-five fish per trip if the treatment is successful. Yearling trout should average about 11 inches. Carryovers should be expected to be about 20 percent of the catch, and average 15 inches for 2-year-old fish.

VII. ECONOMIC IMPACTS:

Rehabilitation would restore the fishery and associated economic activity. An estimated 10,000 or more trips will be made to Pearrygin Lake as a result of the proposed management action, with an economic impact totaling \$1,320,000 per year (2004 dollars; based on WDW estimate of \$132 per trip). Fingerling plants will cost the agency \$4,550, but is far less than the \$52,500 it now costs to produce the larger fish needed to counteract the presence of competing spiny ray species.

The cost of treatment will be approximately \$35,000, but the increase in license sales and subsequent boost to the local economy will more than offset that loss within two years after treatment.

VIII. RELATED MANAGEMENT ACTION:

Approximately 32,000 catchable (8"-10") and 65,000 fingerling (3"-4") rainbow trout will be stocked in early spring to provide immediate fishing opportunity. After the first year, subsequent fish plants will consist of fingerling trout only. Creel checks will be done annually on Pearrygin Lake, as well as population analysis to help in future management plans.

IX. PUBLIC CONTACT:

Public concern over the increasing numbers of lakes in Okanogan County with undesirable species infestations prompted this action.

A public meeting was held at the Methow Fish Hatchery in Winthrop on July 18th to discuss the rehab proposals. There were four people that attended the meeting (one from the Methow Fly Fishers, one from the Fly Fishing Federation, one from the Methow Valley News, and one from the Department of Ecology). Proposals and procedures for the lake rehabs were discussed and there were no objections noted to the plan.

Initiated by: Region Two Fisheries Management